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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,308

07/05/2005

Kinya Kawase

050390

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23850 7590 05/29/2009  
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EXAMINER

ZHU, WEIPING

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

05/29/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,308	<b>Applicant(s)</b> KAWASE ET AL.	
	<b>Examiner</b> WEIPING ZHU	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,9-11,14,15 and 18-27 is/are pending in the application.
- 4a) Of the above claim(s) 10, 11, 14, 15, 18-21 and 25-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,9 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 29, 2009 has been entered.

### ***Status of Claims***

2. Claims 1, 2, 5, 6, 9 and 22-24 are currently under examination wherein claims 1, 2, 5 and 6 have been amended in applicant's amendment filed on April 29, 2009.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5, 6, 9 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 06-041609 in view of Svilar et al. (US 4,731,118).

With respect to claims 1, 2, 5 and 6, JP ('609) discloses a method of manufacturing a ferrous sintered alloy member (abstract) having a composition by weight of 1.5% of copper, 0.9% of graphite (i.e. carbon), 0.067% of oxygen (Table 4,

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comparative example 15) and the balance of iron and inevitable impurities; the method comprising (paragraph [0011], machine translation):

formulating an iron powder, a graphite and a Cu powder as raw powders;

mixing the powders to form a powder mixture; and forming the powder mixture into a green compact and sintering the green compact at 1130 °C, which is within the claimed sintering temperature range.

JP ('609) does not disclose the copper alloys as claimed. Svilar et al. ('118) disclose a prealloyed copper comprising by weight 2-3% of iron, 0.5-1.5% of manganese and a total of 0.5-1.0% of silicon and other elements (col. 4, lines 52-55 and col. 6, lines 15-44). The contents of iron and manganese of the copper alloy of Svilar et al. ('118) overlap the respective claimed contents; the content of silicon and other elements of the copper alloy of Svilar et al. ('118) is close to the highest silicon content as claimed. Svilar et al. ('118) does not specify the content of oxygen of the copper alloy. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the oxygen content of the copper alloy would have been close to the claimed content, because the copper alloy of Svilar et al. ('118) is substantially identical to the claimed copper alloy in composition and process of making.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the copper of JP ('609) with the copper alloy of Svilar et al. ('118) in order to achieve even better combinations of impact strength and ultimate tensile strength as disclosed by Svilar et al. ('118) (col. 2, lines 45-52).

JP ('609) discloses that the sintering is performed in a propane converted gas atmosphere without specifying the sintering atmosphere as claimed (paragraph [0011], machine translation). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the propane converted gas atmosphere of JP ('609) with the presently claimed hydrogen atmosphere containing nitrogen in the process of JP ('609) with an expectation of success, because the atmospheres are functionally equivalent as disclosed by Svilar et al. ('118) (col. 3, lines 7-59). See MPEP 2144.06.

With respect to claims 9 and 22-24, JP ('609) in view of Svilar et al. ('118) discloses that the powder mixture comprises by weight 1.5% of copper alloy powder, 0.9% of graphite powder and the balance of iron powder (JP ('609), paragraph [0011], machine translation). The contents of the copper alloy powder and the graphite powder overlap the respective claimed contents. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05 I.

### ***Response to Arguments***

4. The applicant's arguments filed on April 29, 2009 have been fully considered but they are not persuasive.

The applicant argues that JP ('609) does not teach the amended features in instant claims 1, 2, 5 and 6. In response, see the examiner's comments regarding the amended features in the rejection above.

***Conclusions***

5. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Wyszomierski/  
Primary Examiner  
Art Unit 1793

WZ  
5/26/2009